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ACHIEVMENTS OF USSR PETROLEUM INDUSTRY DURING 1953 AND TASKS FOR 1954

N. K. Baybakov, Minister of the Petroleum Industry USSR

In 1953, Soviet oil workers achieved great successes in tasks established by the party and government, having fulfilled the plan for the third year of the Fifth Five-Year Plan. In 1953, the petroleum industry produced hundreds of thousands of tons of petroleum, petroleum products, and many other kinds of products above the yearly plan.

The growth of production in 1953 was a result of increased capacity and the intensification of production processes in petroleum production, refining, and machine construction. The growth of geological surveying, geophysical work, and exploratory work continued. As a result, new deposits of petroleum and gas were discovered in a number of regions of the South and in the extensive Volga-Ural petroleum and gas district.

In 1953, the mapping of previously discovered, highly productive deposits of petroleum and the discovery of new petroleum deposits resulted in a substantial increase in industrial reserves of petroleum and gas.

However, there are serious shortcomings in geological prospecting work in certain petroleum and gas districts. For example, in the Azerbaydzhan SSR and the Dagestanskaya ASSR, with the exception of offshore areas, exploration results were not very impressive. Exploratory and geophysical work in the Eashkirskaya ASSR and Central Asia is lagging inadmissably.

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In 1954, the task for petroleum and gas geologists and prospectors is the further increase in the effectiveness of geological prospecting and geophysical and exploratory work, especially in the following regions: Azerbaydzhan (on land), Turkmeniya, Fergana, and Bashkiriya. The discovery of petroleum and gas deposits in Siberia in the near future is of great importance to the national

In 1953, drilling workers increased the volume of drilling work and achieved certain successes in the perfection of drilling technology. Drilling speeds substantially increased and a further increase in turbodrilling was attained. In December 1953, the volume of turbodrilling was 54 percent of all drilling. The turbobit KTD-3, which makes possible the recovery of up to 70 percent of a core (kern), is widely used to hasten the introduction of the turbine method in exploratory drilling.

The further development of an innovator movement among drilling workers, foremen, and engineers made possible an improvement in the indexes of drilling work. In the eastern regions, innovator-foremen Allayarov and Gaydulin attained drilling speeds of more than 2,200 meters per machine-month. The mechanical speed of drilling was 24-26 meters per hour, i.e., the level of mechanical speeds for the southern regions of the country.

The leading foremen of the southern regions attained the following high drilling speeds: foreman Sh. Shaydabekov of the Buzevny Drilling Office, 5,916.7 meters, and foreman I. Tokmakov of the Krasnodarneft' Association, 6,057 meters.

Methods of the forced system of drilling are receiving wider application. The number of rigs on a forced system of drilling on 1 October 1953 was 63 percent greater than on 1 October 1952.

The new method of drilling oil wells in resistant strata, using water in place of a mud solution to wash the stope of the well, is finding wider distribution. In 1952, about 30,000 meters were drilled using water in place of a mud solution, and in 1953 more than 600,000 meters were drilled by this method.

In spite of attainments, the 1953 plan for drilling was not completely fulfilled. Poor organization of work frequently causes idle time and shutdowns, which lower the rate and quality of drilling, especially exploratory drilling.

One of the chief problems in the field of perfecting drilling technology is the development of a highly productive bit for continuous drilling. The quality of existing bits does not conform to new drilling conditions. One bit drills 10 meters in 2-3 hours; lifting and lowering operations for the replacement of the worn-out bit require a substantially greater time. Our machine building plants and scientific research institutes especially have fallen greatly behind in their obligations to drillers; their task in 1954 is to reinforce our drilling technology with a highly effective bit.

Another problem is to speed up introduction of turbodrilling in the southern regions. This would require the construction of a special turbodrill which would be effective in these regions.

Serious problems also confront exploratory drilling and construction organizations in developing and introducing technology and equipment for drilling under complicated conditions and for drilling wells up to 5,000 meters deep.

The construction of new oil fields and the use of new systems for developing petroleum regions has assured high rates of growth of petroleum production. The widespread introduction of contour [water] flooding methods and secondary methods has helped to stabilize petroleum production by old oil wells and to increase steadily the number of medium-output wells in many regions.

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However, many directors still do not understand that the growth in petroleum production is determined by perfecting the technology in exploiting petroleum strata and by continual observation and control over the exploitation of strata and wells. [This type of] survey work has lagged considerably in the Azneft' Association, as a result of which the effectiveness of measures for introducing secondary met' do of petroleum production has been low at many oil fields of the association.

In 1954, the task of every association and trust is to increase still further the introduction of methods for maintaining pressure and of secondary methods and to obtain a sharp increase in petroleum production by these methods. It is also necessary to perfect the technology of deep-well pump exploitation and to speed up the conversion of compressor oil wells to [deep-well] pump exploitation to lower the cost of petroleum production.

It is the task of designers and machine builders to organize, in the shortest possible time, the assembly-line production of the following equipment: electric pumps with wear-resistant parts, powerful pumping jacks with a load capacity of 12-15 tons and a stroke distance of up to 6 meters, long-stroke, deep-well pumps, and other equipment for the operation of input wells and for the exploitation

In the field of petroleum refining, 1953 was marked by a further increase in capacity, production of petroleum products, and the amount of light end products derived from crude stock.

In connection with the growth of the diesel park and jet engineering (reaktivnaya tekhnika , the production of diesel fuels and aviation kerosene sharply in-

In a series of petroleum regions, the large-scale construction of large-capacity petroleum refineries, on the basis of the newest technology, was realized. New systems for refining petroleum, developed in institutes for these refineries, assured the derivation from sulfurcus petroleums of a wide assortment of high-quality fuels and oils and the substantial production of light end petroleum products.

Intensification of production processes by the wide diffusion of the experiences of innovators and the introduction of more progressive technical norms are necessary to the further development of petroleum refining. The construction of new petroleum refineries is also necessary.

The most rapid perfection and practical testing of new technological processes for the extensive refining of mazut and heavy petroleum bottoms will allow a substantial increase in the production of light end petroleum products from [crude] petroleum and in an improvement in the quality of petroleum products.

Selective refining of oils and the use of additives to improve the quality of fuels and oils must receive extensive development. It is necessary to continue lowering losses and the expenditure of fuel during the production of petroleum products.

The young gas industry is undergoing development. The discovery of a series of gas deposits has made possible the gasification of many cities and industrial regions of the country; a number of large-capacity gas pipelines have been constructed.

A new branch [of the petroleum industry] -- the production of natural gasoline, of liqueried gas, and gas black -- has been built to process gas associated with petroleum (poputnyye neftyanyye gazy).

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However, the rate of development of the gas industry is still insufficient. The most serious shortcomings lie in the substantial number of oil fields, especially in the regions of Tatariya, Bashkiriya, Kuybyshev, Krasnodar, and Turkmeniya, where work is lagging considerably in the hermetization of petroleum production and in the construction of natural-gasoline plants. Moreover, the fining of gas and the derivation from gas of valuable products still are going poorly.

The collective of workers of the Glavneftesbyt system achieved an improvement in supplying petroleum products to the national economy during 1953. In 1954, workers of Glavneftesbyt must accomplish the following tasks: fulfill the plan for delivery of petroleum products to the national economy, take measures for fulfilling the plan for pumping petroleum and petroleum products along trunk pipelines and for the fulfillment of the plan for transport of petroleum cargoes by rail and water transport, assure the uninterrupted work of petroleum refineries by fulfilling the plan for delivery of crude petroleum and for timely shipment of finished products, furnish the populace with an uninterrupted supply of illuminating kerosene, take measures for the centralized delivery of petroleum products in the large cities, and substantially decrease handling costs.

Machine builders of the Ministry of Petroleum Industry fulfilled the 1953 plan. However, to increase the production and refining of petroleum in 1954, machine builders must further improve work and increase production, by increasing labor productivity and perfecting production technology. The machine builders must supply the petroleum industry with new types of machinery to improve production processes and to lighten the work of oil workers.

In 1954, extensive industrial testing and completion of construction of complex joints (uzla) for the mechanization of lifting and lowering operations in drilling must be accomplished. Moreover, in subsequent years, drilling workers must be supplied with this equipment, which is designed to free drilling brigades from manual work. The production of cement mixers must be greatly expanded. In the shortest possible time, it is necessary to make the full transition to the construction of oil wells by the ascembly of standard members and joints (elementy i uzla) which are to be manufactured by industrial methods. New types of centrifugal pumps are needed for trunk pipelines possessing capacities of 500, 750, and 1,000 cubic meters per hour under pressures up to 65 atmospheres.

Especially great problems confront instrument makers. The following instruments must be devised: a group of instruments for making deep measurements; instruments for the control of drilling processes; a series of automatic devices and instruments providing remote-control management and direction of oil wells under the conditions of the eastern regions and offshore oil fields; instruments and automatic devices making fully automatic the work of petroleum refineries, trunk pipelines, and petroleum bases: 100-channel seismic stations; offshore seismic stations; and complex automatic electric-, gas-, and radio-logging (karottazhnyye) stations. The production of stations making use of radioactive ing into strata must be expanded.

In 1953, the volume of construction and assembly work completed by construction organizations of the Ministry of Petroleum Industry increased by 12 percent in comparison with 1952. In 1.53, a substantial quantity of industrial, housing, and cultural structures was completed. However, there are a number of important shortcomings in construction. For example, the financing, documentation, and equipping of construction projects have lagged in a number of cases. Consequently, construction objectives were finished behind schedule.



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In 1954, construction organizations of the petroleum industry must complete substantial volumes of work in the construction of oil fields, petroleum refineries, gasworks, pipelines, metal storage facilities, housing, and cultural buildings. In 1954, the construction organizations must build a substantial number of projects for agriculture, trade, and the production of industrial and consumer goods.

The following are necessary for the fulfillment of the large-scale construction program designated for 1954: the allocation of capital investments and material and technical resources for the completion of construction projects carried over from 1953, which will decrease the volume of incomplete capital construction; and the ending of excessive turnover of construction workers, which will improve their living conditions and housing, and will thus create a continuous cadre of builders.

In 1953, enterprises of the petroleum industry, as a whole, fulfilled the plan established for production losts. However, in a number of main administrations which fulfilled the plan for production costs, there were many lagging enterprises. For example, in the third quarter of 1953, 94 enterprises in Glavzapadneftedobycha (Main Administration for Production of Petroleum in the Western Regions) failed to fulfill the plan for production costs. The same situation existed in the Sredazneft' and Kazakhstanneft' associations.

The cost of drilling work is completely unsatisfactory. Grozneft', Molotovneft', Saratovneft', Dagneft', and Gruzneft' possess poor economic indexes in this respect.

Enterprises of the petroleum industry, as a whole, overfulfilled the plan for accumulation of [capital]. However, the following enterprises failed to fulfill this plan: Azneft' Association oil fields, Ukhta Combine, Azneftezavody Association, Bashneftezavody, Krasnovodsk Petroleum Refinery, and certain other petroleum refineries. The Azneftemash Trust also is lagging in this field.

The September Plenum of the Central Committee of the CPSU and the resolutions of the Council of Ministers USSR and of the Central Committee of the party concerning the development of socialist agriculture placed important tasks before workers of the petroleum industry. The sharp rise in all branches of agriculture is the most important task of the Soviet people.

The petroleum industry in a thorough and timely manner must guarantee the following: the delivery of fuel to agriculture, the supply of MTS and sovkhozes with lubricants and ASFO filters, and the organization of work to reclaim used lubricating oils for agricultural use.

In a number of regions, the petroleum industry has the task of providing agriculture with mobile drilling rigs and equipment for drilling water wells. of providing technical assistance in this matter to the Ministry of Agriculture, and, in certain regions, of conducting the drilling itself.

As in the example of the Moscow Plant [Refinery?], waste steam and gas at petroleum refineries and many oil fields can be of real assistance in kolkhoz and sovkhoz hothouses.

In 1954, petroleum workers will successfully resolve all tasks placed before them, which are directed toward the sharp rise of agriculture, light industry, the food industry, and trade, for the maximum satisfaction of the growing needs of Soviet society.

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